

PRINTERS & SCANNERS

FAQ

Q When my laser printer is running low on toner, I've heard that shaking the cartridge can help. Does this actually work?

A During its long life, a proportion of the powder in any toner cartridge inevitably becomes lodged in the top and sides of the cartridge. This means that when your toner appears to be running low there will actually be a small reserve of powder remaining that many people waste when they simply replace the cartridge.

It may seem a very low-tech solution, but taking a toner cartridge out and vigorously rocking it back and forth loosens some of the stuck powder and allows the printer to use it. You'll probably only get a few extra days out of it this way, and there's no guarantee that the quality of output will improve significantly for those bonus pages, but with toner cartridges costing so much it's a great way to stretch your budget that little bit further.

David Bayon

Printers Correspondent

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LEXMARK Z1420

★★★★

£52 inc VAT

Wireless adaptors for inkjet printers have traditionally been expensive extras, but Lexmark doesn't believe this should be the case. Its new range of inkjets aims at the home printing market by introducing wireless as standard. The Z1420 costs just £52, so it may force other manufacturers to lower their prices for the technology.

Ironically, given its main selling point, the Z1420 is that rare thing: a printer that comes with a free USB cable. It's only needed initially to transfer the wireless settings to the printer and after that it can be unplugged. If you do want the option of printing over a wired connection, too, you'll have to run the installation twice to set it up.

Lexmark has reworked its installation wizard to walk you through every step of the setup, so it's easy to get running no matter what your technical ability. When powered up, the wireless symbol on the front glows a variety of different colours to indicate what needs doing to get the connection up and running, so there shouldn't be too many problems adding the Z1420 to your existing home network.

Once installed, we had no problems printing our test documents over the wireless connection, which is unsurprising given that the only real bottleneck involved is the speed of the printer itself. As with previous Lexmark inkjets, it isn't the quickest around: it printed our mono test documents at a fairly decent 12ppm in draft mode and 8.8ppm at normal quality, but this fell to less than a page per minute when we moved to colour text and graphics. Text showed



slightly rough edges, and the colours in our presentation were a little streaky and pale, but everything remained perfectly legible.

The high-yield black and colour cartridges give low running costs of just 5.8p per page of text and graphics, but for photos you'll need the optional photo cartridge for better quality. The Z1420 is no speed demon with photos, taking over 15 minutes to produce all six of our 6x4in test prints, and nearly five minutes for a single A4 print. Outdoor scenes appeared slightly washed out and a graininess affected all of our test prints,

but these are minor niggles that can be ignored when printing your holiday snaps.

Notebook users shouldn't underestimate the ease of being able to print from anywhere in the house without the hassle of wires. Running off a couple of prints from the sofa is remarkably liberating, and we can only hope other manufacturers follow suit in due course. Lexmark's Z1420 is not meant to be an expert photographer's dream partner, but it deserves much credit for providing wireless at such a cheap price.

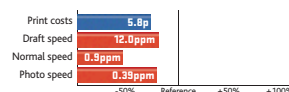
David Bayon

SUMMARY

- ✓ Wireless or USB connections
- ✓ Low running costs; affordable price
- ✗ Average quality; slow colour prints

INKJET PRINTER Four/six-colour inkjet, 4,800x1,200dpi resolution, USB Hi-Speed and 802.11g wireless interfaces
PART CODE 0080D2906
SUPPLIER www.dabs.com
DETAILS www.lexmark.co.uk

PERFORMANCE (see page 58)



Also consider...

SAMSUNG ML-2510

★★★★★

£42 inc VAT

PRICE CUT!



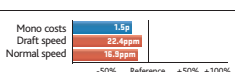
This grey laser printer may look a little drab, but

it's easy to set up and quick to install. It has a 250-sheet covered input tray and a single-sheet multipurpose feed slot, but it crumples envelopes.

The ML-2510 peaked at 22.7ppm when printing text, which is impressive for such an affordable printer. It's also cheap to run, with a cost per page of around 1.5p, yet produces high-quality text and mono graphics. It's a great compact budget mono laser printer.



MONO LASER PRINTER 1,200x600dpi resolution, 24ppm maximum speed, parallel and USB Hi-Speed interfaces
PART CODE ML-2510
SUPPLIER www.printerland.co.uk
DETAILS www.samsung.co.uk
✓ Fast; affordable to buy and run; good print quality
FULL REVIEW Oct 2006



DELL Multifunction Laser Printer 1815dn

★★★★★

£335 inc VAT

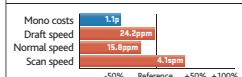


Dell's Multifunction Laser Printer 1815dn

can scan in colour and make black-and-white prints and copies. It has a standard network interface and can print on both sides of a sheet of paper automatically. It produces sharp scans, high-quality text documents and decent copies, though they can be a little too dark. It's fast, easy to use and cheap to run, so it's ideal for a busy office.



MONO LASER MULTIFUNCTION PERIPHERAL 600x600dpi print resolution, 600x1,200dpi scan resolution, USB and 10/100 Ethernet interfaces
SUPPLIER Dell 0879 075818
DETAILS www.dell.co.uk
✓ Fast; cheap to run
✗ Dark PostScript prints
FULL REVIEW Nov 2006



KODAK EasyShare 5300

★★★

£140 inc VAT

While most of the big inkjet manufacturers have moved to individual ink tanks to make printing more economical, Kodak is turning that approach on its head. As well as a standard black cartridge for mono documents, Kodak's first foray into the multifunction peripheral (MFP) market – the EasyShare 5300 – has a single 5-in-1 colour cartridge that the company claims has an astonishing running cost of just 7p per photo.

Inside this cartridge sit the usual cyan, magenta and yellow tanks, as well as an extra photo black and a fifth tank of clear gloss to give photos a protective coating. All the tanks are supposedly filled with different amounts of ink to avoid too much wastage of the less-used colours and to keep the cost of the cartridge down. Of course, these calculations assume that you will be printing 'average' prints and not using the less-used colours too much; if

you run a print job that uses these colours more than you may have to replace the cartridge early.

Kodak claims that this colour cartridge will print 105 prints at the highest quality setting or 180 at the medium setting, yet it retails for just £9.99. As you might expect, though, there's small print to read.

To achieve the claimed 7p per print you need to buy Kodak's value pack, which consists of a colour cartridge and 180 sheets of Kodak's 3-star Photo paper. If you're just running off the family snaps to stick in an album you'll be fine, but for any other purpose the paper is so thin and insubstantial that we can't see your prints lasting too long. If you print on the far superior 5-star Ultra Premium paper, you'll need to add a whopping 33p per sheet, which starts to make the 5300 look considerably more expensive.

Prints are pretty good, with sharp edges and no visible banding, although all our prints were tinged with a noticeable magenta hue. They also came out extremely quickly, with all six of our 6x4in photos arriving in less than four minutes. If you do a lot of printing and you don't require perfection, the 5300 is a decent enough choice.

The scanner is decent, too. Our test images had accurate colour tones and a good level of detail, and the 5300 kept pace with the best MFPs we reviewed in last month's *Labs* test. We hoped this would be the same for the copier, too. However, it took 51 seconds just to get a single mono copy and, bizarrely, just 40 seconds for the same copy in colour. The colours appeared washed out, so you might need to tweak the darkness setting in the menu.



If you do so, you'll realise that the control panel is one of the 5300's best features. The high-resolution 3in LCD is excellent, especially for those times when you want to print from a memory card. You shouldn't have to use the screen much, though, as the printer has been designed to minimise the time you'll need to spend trawling through menus. For example, to print on 6x4in photo paper, you merely push the photo tray into the printer until the green light comes on; anything you then print will automatically use that paper until you pull it out and revert to the standard tray.

The 5300 is full of nice design touches such as this. It also includes a pair of USB ports so you can connect extra peripherals, and a print-and-scan calibration procedure that helps familiarise you with the scanner.

The Kodak EasyShare 5300 is clearly aimed at the less-experienced everyday home user rather than the photo enthusiast, especially as the differing costs of Kodak's papers means you'll be able to recoup some of the huge £140 purchase cost only if you're happy to print on the cheapest paper. If you prefer the best possible quality, you should look instead to Canon's PIXMA MP510 (see 'Also consider...', below).

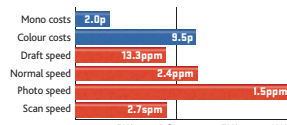
David Bayon

SUMMARY

- ✓ Fast prints; intuitive control panel
- ✗ Far too expensive
- ✗ Only cheap to run with poor paper

COLOUR INKJET MFP Print resolution not stated, 200dpi scan resolution, USB Hi-Speed and PictBridge USB interfaces
PART CODE EasyShare 5300
SUPPLIER www.kodak.com
DETAILS www.kodak.com

PERFORMANCE (see page 58)



CANON PIXMA MP510

★★★★★

£73 inc VAT



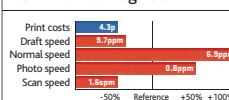
The MP510 has excellent print quality,

particularly when reproducing text documents, but it's also quick and cheap to print. The scanner isn't quite as good as the printer, but it's good enough for occasional jobs.

The MP510 was the fastest MFP for photo printing in our recent *Labs* test, and is great value.



COLOUR INKJET MFP 4,800x1,200dpi print resolution, 25ppm mono/17ppm colour maximum speed, 1,200x2,400dpi scan resolution, USB Hi-Speed, PictBridge USB, IrDA infrared interfaces
PART CODE 1450B019AA
SUPPLIER www.ebuyer.com
DETAILS www.canon.co.uk
✓ Superb text quality; low running costs
✗ Scans are slightly soft
FULL REVIEW Aug 2007



KONICA MINOLTA Magicolor 2500W

★★★★★

£171 inc VAT

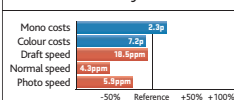


The Magicolor 2500W is one of the cheapest colour laser printers, but it gets the essentials right.

It's compact, easy to set up and use, and produces good-quality prints. With basic paper handling and no scope for upgrades, it isn't suitable for demanding users, but home users will find it great value.



COLOUR LASER PRINTER 600x600dpi resolution, 20ppm mono/5ppm colour maximum speed, USB Hi-Speed interface
PART CODE A00V021
SUPPLIER www.printerbase.co.uk
DETAILS www.konicaminolta.com
✓ Affordable, good print quality
✗ Basic paper handling
FULL REVIEW May 2007



HP Photosmart D7160

★★★★★

£83 inc VAT

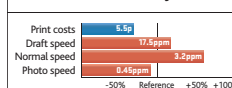


HP's Photosmart D7160 costs less now than it did when it won our Best Buy award. It doesn't produce the best photo quality we've seen, but it's fast, affordable and easy to use. It's equally happy reeling off A4 pages of high-quality text or printing photos directly from a memory card.

We don't think it's worth paying extra for the touch-screen-equipped D7360 when the D7160 is this good.



A4 PHOTO INKJET Six-colour inkjet, 4,800x1,200dpi resolution, USB Hi-Speed and PictBridge USB interfaces
PART CODE Q7047B
SUPPLIER www.amazon.co.uk
DETAILS www.hp.co.uk
✓ Cheap to buy and run; easy to use
FULL REVIEW Jan 2007



DELL Color Laser 1320c

★★★★

£222 inc VAT

The 1320c is Dell's most compact colour laser printer, with a footprint small enough to squeeze on to the most cramped of desks. The slick black styling is far easier on the eye than most beige plastic printers, and Dell has made sure setup is as straightforward as possible. Slot the install disc in your drive and you'll be greeted by a full step-by-step video guide to setting up your printer.

The side door clicks open for access to the four toner cartridges. Dell provides a starter set with enough toner for 1,000 sheets in each colour. Standard replacements last twice this long. The cartridges lock into place very simply, and the print mechanism is quickly removed and set up by turning four locks inside the front. The standard model we reviewed has just a USB connection, but an optional network-enabled model is also available for an additional £23.50, which in our eyes is a worthy investment, as it makes sharing the printer over a network really easy.

There's a tray for 150 sheets of plain paper and a single-sheet front feeder for more unusual sizes and formats, but we were a little disappointed by the 1320c's print speeds. Using the toner-saver option in the driver, we printed our 50-page document at a speed of 11.7ppm, somewhat short of Dell's claimed 16ppm. It also pauses every ten or so pages. The better news is that speeds didn't drop too much when we switched to colour, with a rate of 10.1ppm, which was pretty close to the claimed 12ppm.



The 1320c's quality really shines through in colour documents. It produced impressively bold and glossy prints, with perfectly sharp characters and vivid colours. Mono text was a little poorer, with very minor feathering around the edges, but that's being overly critical; all in all we were pleased with the quality of prints.

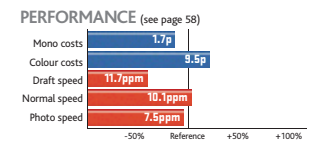
Dell quotes a running cost of 1.7p per mono page, which is towards the upper end of the scale for a laser printer, but the Toner Management software in the driver should keep you informed when your cartridges are running low, and you can opt to conserve toner, too. What may put you off more, though, is the high price: £222 is dear even for a colour laser printer. Konica Minolta's Magicolor 2500W (see 'Also Consider...' page 25) is over £50 less, costs almost the same to run and has similar print quality. For those on a tight budget, it remains our recommended colour laser printer.

David Bayon

SUMMARY

- ✓ Excellent colour quality
- ✓ Very simple setup; small footprint
- ✗ Not particularly quick; expensive

COLOUR LASER PRINTER 600x600dpi resolution, USB Hi-Speed interface
PART CODE 1320c
SUPPLIER www.dell.co.uk
DETAILS www.dell.co.uk



CHOOSING AN... Inkjet Printer

Follow the steps to find your ideal specs

PAGE SIZE: A4

QUOTED SPEED: 18ppm mono, 12ppm colour

PRICE PER PAGE: 8p text and graphics

RESOLUTION: 4,800x1,200dpi

INK COLOURS: Four in two tanks

FEATURES:

Recommended minimum in grey

1 You can get a decent inkjet for under £40. With the minimum spec shown above, high-quality printing is possible, but slow. The actual print speed of inkjets can be half the quoted (maximum) speed on text documents, and even slower when printing graphics. Budget inkjets such as these are designed only for light use and can be expensive to run.

2 Spending £60 will get you a much more capable printer that is either faster and better built or better at reproducing photos. If your priority is documents, you'll want double the minimum speed and half the print costs of the sub-£40 printer. Look for inkjets that can handle all your office media, including envelopes and labels.

3 If your priority is photos, speed is less important. Instead, choose a printer that can reproduce subtle tones well. Only hands-on testing, not specifications, will tell you this, so check our reviews. Borderless printing (right up to the edge of the paper) should also be possible. Pay particular attention to running costs: photos use three times as much ink as regular colour documents.

4 Heavy-duty office inkjets can cost up to £1,000 and their build quality is improving. They use large, individually replaceable ink tanks which can cut running costs. Printers with automatic duplex (double-sided) printing or A3 capability are becoming more affordable.

5 Pricier photo printers allow you to print digital photos by plugging memory cards straight into the printer – no PC is required. An LCD preview screen gives you more control over this. Many inkjet printers now have a PictBridge USB port, which can be used to print images directly from most digital cameras.

6 If you're really serious about photography, consider buying an inkjet that can print up to A3+ without borders. The best produce prints nearly as good as those from a professional lab.

Also consider...

CANON PIXMA iP4300

★★★★★

£63 inc VAT

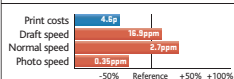


If you need a budget printer, Canon's

PIXMA iP4300 shows that you don't need to compromise on quality. It has two paper trays, and can print on coated CDs or both sides of each sheet of paper. It's fast to produce text, colour graphics and photos. Print quality is high, with no trace of grain, though photos are a little bit oversaturated. Best of all, it has very low running costs.



INKJET PRINTER Five-colour inkjet, 9,600x2,400dpi maximum resolution, USB and PictBridge USB interfaces
PART CODE 1438B008AA
SUPPLIER www.amazon.co.uk
DETAILS www.canon.co.uk
✓ Inexpensive; fast; flexible; stylish; high-quality results
FULL REVIEW Dec 2006



CANON PIXMA MP160

★★★★★

£42 inc VAT



The PIXMA MP160 costs less than many

budget inkjet printers, and it can also make good-quality scans and copies. It's compact and attractive and not too tricky to set up. Unusually for such an affordable printer, it has low running costs if you use Canon's high-capacity ink cartridges. It's great value if you just want a basic multifunction peripheral.



FOUR-COLOUR INKJET MFP 4,800x1,200dpi print resolution, 600x1,200dpi scan resolution, USB Hi-Speed and PictBridge USB interfaces
PART CODE 1447B008AA
SUPPLIER www.morecomputers.co.uk
DETAILS www.canon.co.uk
✓ Affordable; good results
✗ No card reader
FULL REVIEW Jan 2007

